WASHINGTON STATE DEPARTMENT OF HEALTH
OFFICE OF FOOD SAFETY AND SHELLFISH PROGRAMS

ANNUAL GROWING AREA REVIEW

PREPARED BY: Donald Melvin, Environmental Specialist

AREA: Naselle River

YEAR ENDING: December 31, 2005

CLASSIFICATION: Approved, Prohibited

ACTIVITIES IN THE GROWING AREA IN 2005:

Samples were collected from each station in the growing area 6 times during the year using the systematic random sampling method.

ANALYTICAL RESULTS OF WATER SAMPLES:

Table #1 summarizes the results of the most recent 30 samples collected from the area in accordance with NSSP SRS criteria. This summary shows that all stations in the Approved portion of area pass the NSSP water quality standard. The Table #1 data summary shows that station #155 fails the NSSP water quality standard for an Approved classification. The portion of the area in the vicinity of the Naselle River mouth, represented by sampling stations #154 and #155, has been designated as Unclassified. This portion of the area was unclassified because for the past several years stations #154 and #155 have been listed as either Threatened or of Concern due to poor water quality and because the shellfish beds in this area are used only for shellfish seed production meaning that shellfish from these beds are moved to other areas for several months before being harvest for direct sale. Table #1 also shows that stations #154, #161, and #162 are threatened and stations #152, #153, #156, #157, #158, and #160 are of concern due to elevated bacteria levels. Individual sample results for stations #154, #155, #161, and #162 are shown in Tables 2, 3, 4, and 5 respectively.

CHANGE IN ACTUAL POLLUTION SOURCES THAT IMPACT THE GROWING AREA:

Water quality in portions of the area has been deteriorating indicating the presence of active sources of bacterial contamination.

CLASSIFICATION STATUS:

- ☐ Well within the classification standards
- ☐ Meets standards but some concerns
- ☒ Meets standards but threatened with a downgrade in classification
- ☐ Fails to meet classification standards

REMARKS AND RECOMMENDATIONS:

Water samples collected by DOH staff from three stations located above the highway bridge on the Naselle River frequently produce elevated bacteria levels which suggests that pollution sources located in the Naselle River watershed are contributing to the water quality problem in the area represented by stations #154 and #155.

TABLE 1

SUMMARY OF MARINE WATER DATA (SRS)

Growing Area: **NASELLE RIVER**

Classification: **Approved,Unclassified**

From **11/16/2000** To **11/30/2005**

FECAL COLIFORM ORGANISMS/100 ML

Station Number	Classification	Number of Samples	Range	Geometric Mean	Est. 90th Percentile	Meets Std.
147	Approved	31	1.7 - 17.0	2.6	7.0	Yes
148	Approved	30	1.7 - 70.0	2.4	7.0	Yes
149	Approved	31	1.7 - 22.0	3.4	11.0	Yes
150	Approved	30	1.7 - 70.0	3.6	15.0	Yes
151	Approved	31	1.7 - 33.0	3.0	10.0	Yes
152	Approved	31	1.7 - 49.0	5.4	26.0	Yes
153	Approved	31	1.7 - 49.0	4.5	25.0	Yes
154	Unclassified	31	1.7 - 130.0	7.4	34.0	Yes
155	Unclassified	31	1.7 - 130.0	8.2	48.0	No
156	Approved	31	1.7 - 79.0	4.8	23.0	Yes
157	Approved	30	1.7 - 49.0	5.7	25.0	Yes
158	Approved	31	1.7 - 46.0	4.6	20.0	Yes
159	Approved	31	1.7 - 49.0	3.7	13.0	Yes
160	Approved	31	1.7 - 95.0	4.5	26.0	Yes
161	Approved	31	1.7 - 95.0	7.1	39.0	Yes
162	Approved	31	1.7 - 110.0	6.3	33.0	Yes

All tides information is presented

The standard for approved shellfish growing waters is fecal coliform geometric mean not greater than 14 organisms/100 ml and an estimate of the 90th percentile not greater than 43 organisms/100 ml. The above table shows bacteriological results in relation to program standards.

Table 2

SUMMARY OF SHELLFISH GROWING AREAS
WATER QUALITY STUDY RESULTS

Growing Area: **NASELLE RIVER**
Sampling Station Number: **154**
Classification: **Unclassified**

Sample Date	Sample Time	Tide	Fcoli/100ml	Temperature	Salinity
11/16/2000	12:49	Flood	11	7	15
02/08/2001	11:29	Flood	2	7	12
03/21/2001	11:45	Flood	4.5	10	20
05/23/2001	13:50	Flood	23	16	16
08/01/2001	11:40	Flood	7.8	17	24
10/18/2001	14:12	Flood	7.8	13	25
12/05/2001	11:42	Flood	33	6	0
02/27/2002	11:22	Flood	7.8	7	12
04/10/2002	13:07	Flood	2	12	16
05/08/2002	11:24	Flood	1.7	12	14
08/21/2002	13:06	Flood	2	17	26
10/17/2002	13:57	Ebb	2	14	28
12/04/2002	12:02	Flood	4.5	10	21
02/12/2003	11:08	Ebb	1.7	7	15
04/16/2003	12:26	Flood	7.8	10	10
05/14/2003	11:41	Flood	7.8	14	15
08/27/2003	13:29	Flood	7.8	19	30
10/08/2003	11:14	Flood	23	15	28
12/03/2003	12:16	Ebb	11	7	8
02/04/2004	11:50	Flood	1.7	6	14
03/04/2004	11:50	Flood	1.7	8	18
05/05/2004	12:48	Flood	49	16	16
07/14/2004	12:43	Flood	7.8	19	22
09/15/2004	12:18	Flood	130	17	16
12/22/2004	11:25	Ebb	6.8	8	12
02/24/2005	11:37	Flood	1.7	7	19
04/20/2005	12:01	Flood	17	11	10
06/22/2005	13:38	Flood	79	18	18
08/04/2005	12:59	Flood	4.5	20	21
10/18/2005	11:55	Flood	33	13	25
11/30/2005	11:32	Flood	6.8	6	20

Number of Samples: 31
Range: 1.7 - 130
Geometric Mean: 7.4
Estimated 90th Percentile: 34

Table 3

SUMMARY OF SHELLFISH GROWING AREAS
WATER QUALITY STUDY RESULTS

Growing Area: **NASELLE RIVER**
Sampling Station Number: **155**
Classification: **Unclassified**

Sample Date	Sample Time	Tide	Fcoli/100ml	Temperature	Salinity
11/16/2000	12:45	Flood	1.8	7	15
02/08/2001	11:26	Flood	7.8	7	14
03/21/2001	11:41	Flood	1.7	10	20
05/23/2001	13:46	Flood	130	16	18
08/01/2001	11:36	Flood	4	17	26
10/18/2001	14:10	Flood	13	13	25
12/05/2001	11:37	Flood	49	6	0
02/27/2002	11:19	Flood	4.5	7	12
04/10/2002	13:03	Flood	1.7	12	16
05/08/2002	11:20	Flood	4.5	12	14
08/21/2002	13:03	Flood	4.5	17	26
10/17/2002	13:53	Ebb	1.7	14	28
12/04/2002	12:00	Flood	4.5	10	21
02/12/2003	11:04	Ebb	1.8	7	15
04/16/2003	12:22	Flood	33	10	10
05/14/2003	11:38	Flood	4.5	13	14
08/27/2003	13:25	Flood	13	19	30
10/08/2003	11:10	Flood	33	15	28
12/03/2003	12:12	Ebb	33	7	8
02/04/2004	11:47	Flood	1.7	6	15
03/04/2004	11:48	Flood	4.5	8	18
05/05/2004	12:43	Flood	49	16	20
07/14/2004	12:40	Flood	17	19	22
09/15/2004	12:15	Flood	130	17	18
12/22/2004	11:21	Ebb	7.8	8	14
02/24/2005	11:35	Flood	1.7	7	19
04/20/2005	11:58	Flood	2	11	10
06/22/2005	13:34	Flood	33	18	20
08/04/2005	12:56	Flood	13	20	24
10/18/2005	12:03	Flood	46	13	20
11/30/2005	11:29	Flood	1.8	6	20

Number of Samples: 31
Range: 1.7 - 130
Geometric Mean: 8.2
Estimated 90th Percentile: 48

Table 4

SUMMARY OF SHELLFISH GROWING AREAS
WATER QUALITY STUDY RESULTS

Growing Area: **NASELLE RIVER**
Sampling Station Number: **161**
Classification: **Approved**

Sample Date	Sample Time	Tide	Fcoli/100ml	Temperature	Salinity
11/16/2000	13:53	Flood	17	7	22
02/08/2001	12:35	Flood	1.7	6	18
03/21/2001	12:45	Ebb	1.7	10	21
05/23/2001	14:45	Flood	70	16	18
08/01/2001	12:50	Flood	7.8	17	28
10/18/2001	14:40	Flood	17	13	28
12/05/2001	13:06	Flood	79	6	6
02/27/2002	12:27	Flood	1.7	7	18
04/10/2002	14:00	Ebb	1.7	12	20
05/08/2002	12:34	Flood	3	13	20
08/21/2002	13:59	Flood	4.5	17	28
10/17/2002	14:47	Ebb	33	14	30
12/04/2002	13:13	Flood	1.7	9	25
02/12/2003	12:12	Ebb	1.7	7	15
04/16/2003	12:57	Flood	13	10	15
05/14/2003	12:30	Flood	11	14	16
08/27/2003	14:20	Flood	7.8	19	30
10/08/2003	12:01	Flood	11	15	30
12/03/2003	12:55	Ebb	11	7	10
02/04/2004	12:59	Ebb	1.7	6	15
03/04/2004	13:00	Ebb	1.7	8	20
05/05/2004	13:59	Flood	49	16	20
07/14/2004	13:51	Flood	4.5	20	25
09/15/2004	13:09	Flood	33	17	22
12/22/2004	12:20	Ebb	2	8	15
02/24/2005	12:49	Flood	1.7	7	22
04/20/2005	12:59	Flood	2	11	14
06/22/2005	14:16	Flood	95	19	20
08/04/2005	13:59	Flood	6.8	20	25
10/18/2005	13:01	Flood	23	13	30
11/30/2005	12:58	Ebb	7.8	6	20

Number of Samples: 31 **Range:** 1.7 - 95

Geometric Mean: 7.1 **Estimated 90th Percentile:** 39

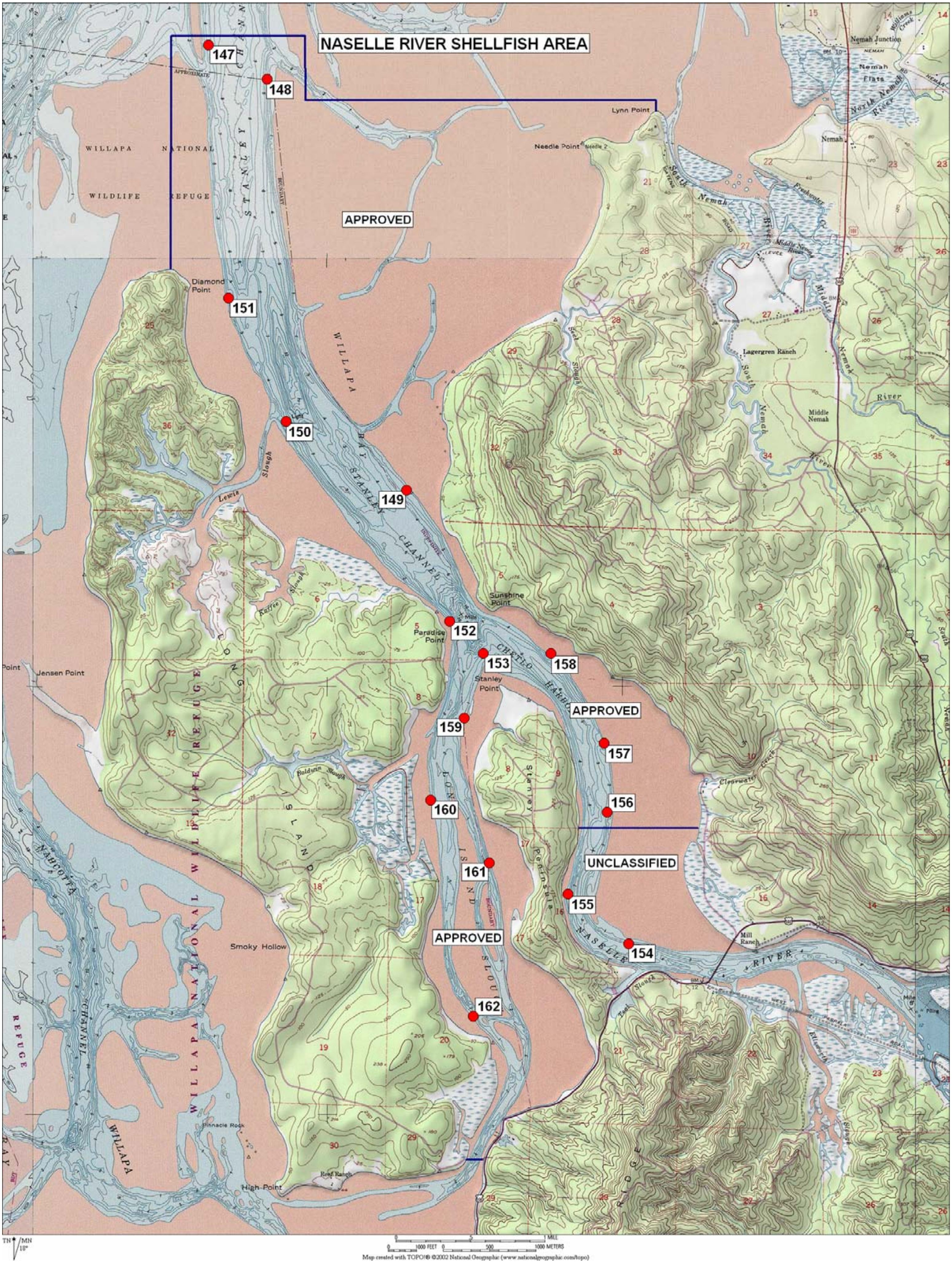
Table 5

SUMMARY OF SHELLFISH GROWING AREAS
WATER QUALITY STUDY RESULTS

Growing Area: **NASELLE RIVER**
Sampling Station Number: **162**
Classification: **Approved**

Sample Date	Sample Time	Tide	Fcoli/100ml	Temperature	Salinity
11/16/2000	13:56	Flood	4.5	7	20
02/08/2001	12:38	Flood	1.7	6	12
03/21/2001	12:48	Ebb	1.7	10	20
05/23/2001	14:48	Flood	79	16	16
08/01/2001	12:54	Flood	6.8	17	26
10/18/2001	14:45	Flood	31	13	25
12/05/2001	13:10	Flood	11	6	6
02/27/2002	12:30	Flood	1.7	7	15
04/10/2002	14:03	Ebb	17	12	18
05/08/2002	12:36	Flood	1.7	13	18
08/21/2002	14:03	Flood	2	17	28
10/17/2002	14:50	Ebb	1.7	14	30
12/04/2002	13:17	Flood	13	9	21
02/12/2003	12:18	Ebb	2	7	15
04/16/2003	13:03	Flood	17	10	14
05/14/2003	12:33	Flood	11	14	15
08/27/2003	14:25	Flood	17	19	30
10/08/2003	12:07	Flood	33	15	30
12/03/2003	12:58	Ebb	7.8	7	10
02/04/2004	13:03	Ebb	2	6	14
03/04/2004	13:05	Ebb	1.7	8	20
05/05/2004	14:03	Flood	33	16	20
07/14/2004	13:55	Flood	1.7	20	25
09/15/2004	13:13	Flood	22	17	22
12/22/2004	12:24	Ebb	1.7	8	15
02/24/2005	12:52	Flood	1.7	7	20
04/20/2005	13:03	Flood	1.7	11	14
06/22/2005	14:19	Flood	110	19	20
08/04/2005	14:04	Flood	4.5	20	24
10/18/2005	13:04	Flood	13	13	30
11/30/2005	13:02	Ebb	7.8	6	20

Number of Samples: 31 **Range:** 1.7 - 110
Geometric Mean: 6.3 **Estimated 90th Percentile:** 33


NASELLE RIVER SHELLFISH AREA
147
148
151
150
149
152
153
158
159
157
156
160
161
155
154
162
APPROVED
APPROVED
UNCLASSIFIED
APPROVED
Diamond Point
Paradise Point
Stanley Point
Sunshine Point
Lynn Point
Needle Point
Jensen Point
Smoky Hollow
High Point
Lagergren Ranch
Middle Nemah
Nemah
Nemah Junction
Mill Ranch
WILLAPA NATIONAL WILDLIFE REFUGE
STANLEY CHANNEL
WILLAPA BAY
LONG ISLAND
CHETLO HARBOR
NASELLE RIVER
Stanley Peninsula
Lewis Slough
Baldwin Slough
South Nemah River
Middle Nemah River
Clearwater Creek
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